

# MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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## INTRODUCTION.

The MONTHLY WEATHER REVIEW for August, 1899, is based on reports from about 3,000 stations furnished by paid and voluntary observers, classified as follows: regular stations of the Weather Bureau, 154; West Indian service stations, 10; cotton region stations, 127; corn and wheat region stations, 133; special river stations, 132; special rainfall stations, 48; voluntary observers of the Weather Bureau, 2,220; Army post hospital reports, 27; United States Life-Saving Service, 14; Southern Pacific Railway Company, 96; Canadian Meteorological Service, 32; Mexican Telegraphic Service, 20; Mexican voluntary stations, 7. International simultaneous observations are received from a few stations and used, together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Hawaiian Government Survey, Honolulu; Senor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Señor A. M. Chaves, Director-General of Mexican Telegraphs; Mr. Maxwell Hall,

Government Meteorologist, Kingston, Jamaica; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; and Capt. J. E. Craig, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local meridian is mentioned.

## FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

Over the greater part of the United States the month of August, 1899, was notably free from severe atmospheric disturbances.

The meteorological event of the month was a West Indian hurricane, which appeared east of Martinique on the morning of the 7th. During the afternoon and night of the 7th this storm devastated the more southern of the Leeward Islands of the Lesser Antilles, and on the 8th caused the loss of hundreds of human lives and destroyed millions of dollars' worth of property in Porto Rico. Moving thence north of west the disturbance crossed the Bahama Islands during the 11th and 12th, attended by a considerable loss of life and property, and from the 13th to the 17th skirted the south Atlantic coast of the United States, after which it disappeared in the direction of Newfoundland. At Porto Rico and Hatteras, N. C., where its vortex passed near regular reporting stations of the Weather Bureau, the hurricane was of exceptional severity, and at Hatteras it will go on record as the severest storm within the recollection of the oldest inhabitants.

From the time this hurricane appeared within the region of observation until it disappeared off the Virginia coast accurate advices regarding its character and course were telegraphed along the line of its advance and preceded its arrival by periods which varied in length from a few hours in the Leeward Islands to thirty-six and forty-eight hours along the south Atlantic coast.

A history of this storm appears under the heading "The

West Indian Hurricane of August 7-17, 1899," and its track is platted on Charts IX-XII.

From the 29th to the 31st a tropical storm of moderate intensity moved from the vicinity of Dominica westward over the Caribbean Sea and recurved northward during the early days of September. A discussion of this storm will appear in the MONTHLY WEATHER REVIEW for September, 1899.

Several severe storms of a local character occurred during the month. On the 1st and 2d a violent storm visited Carabelle, Fla., and vicinity, causing the death of six persons and destroying vessels, property, and crops to the value of \$575,000. On the 2d a group of storms, which in places assumed the intensity of tornadoes, occurred in the Middle Atlantic States. On the 10th about two million bushels of wheat in North Dakota were destroyed by hail. The causes which produce storms of this class are, as a rule, so obscure that it is not possible to define or localize the region in which they will develop.

No special warnings were issued during the month by the forecast officials at Chicago and San Francisco.

Mr. B. S. Pague, Forecast Official at Portland, Oreg., reports that on August 26 the grain crop was threatened with destruction by continuous rains and that a positive assurance from that office that a change to fair, warm weather would occur within thirty-six hours prevented wholesale men from calling in traveling men and a suspension of credits, which would have seriously embarrassed rural merchants, bankers, and, especially, farmers.